ABSTRACT

A touchframe system includes a plurality of light emitting elements and a plurality of light receiving elements positioned around the perimeter of the display area. Each of the light receiving elements in combination with a plurality of the light emitting elements form a zone of light beam paths. The number and positioning of receivers is sufficient to form a plurality of partially overlapping zone pairs. These zone pairs are arranged relative to the display area such that any touch event lies within at least two zone pairs. A processor monitors each of the zone pairs for blockage of at least one light beam path. Upon such blockage, the processor calculates the location of the touch event associated with the blockage based on the slopes and end points of at least two intersecting blocked light beam paths from a first zone pair and two intersecting blocked light beam paths from a second zone pair.